THE EFFECT OF PROJECT-BASED LEARNING (PBL) ON IRANIAN EFL LEARNERS' VOCABULARY RECALL AND RETENTION

By

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Thesis submitted in the fulfillment of the
requirements for the degree of
Master of Arts in Linguistics and
English Language Studies

UNIVERSITI SAINS MALAYSIA

2012

Acknowledgment

I would like to express my sincere gratitude first to my dear supervisor Associate Professor Hajar Abdul Rahim who was abundantly helpful and offered invaluable support and guidance throughout the research. This study would not have been successful without her support and guidance, and I am forever indebted to her. I would also like to convey sincere words of appreciation to all instructors and staffs in the school of Humanities, Universiti Sains Malaysia for providing necessary facilities and help. Besides, I am profoundly grateful to the manager, teachers and students of Talk Language Centre (Rasht, Iran) for their kind cooperation during the study. It is impossible for me to convey completely in words, my heartfelt gratitude to my family. My deepest love and thanks go to my beloved husband, parents and sisters for their understanding, encouragement and endless support throughout my study.

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KESAN PEMBELAJARAN BERASASKAN PROJEK (PBL) TERHADAP PENGINGATAN SEMULA DAN PENGEKALAN KOSAKATA PELAJAR IRAN YANG MEMPELAJARI BAHASA INGGERIS SEBAGAI BAHASA ASING (EFL)

ABSTRAK

Kajian ini mengkaji keberkesanan kaedah PBL (*Project-based learning*) atau Pembelajaran berasaskan Projek terhadap pengingatan semula dan pengekalan kosakata bahasa Inggeris pelajar Iran yang mempelajari bahasa Inggeris sebagai bahasa asing (EFL). PBL merupakan kaedah pengajaran yang melibatkan pelajar belajar melalui projek mereka sendiri. Fitur-fitur utama kaedah ini ialah kolaborasi, pembelajaran yang dikawal sendiri, penggunaan pengetahuan baru untuk menyelesaikan masalah dan refleksi terhadap apa yang telah dipelajari. Fokus PBL adalah terhadap permasalahan atau persoalan asli di mana penyelesaian mempunyai potensi untuk digunapakai. Kajian ini mengukur keberkesanan PBL terhadap pengingatan semula dan pengekalan kosakata pelajar EFL berdasarkan kaedah eksperimen. Bagi tujuan ini, kaedah ujian-pengajaran-ujianpasca (*pretest-treatment-posttest*) digunakan terhadap dua kumpulan subjek, yakni kumpulan kawalan dan experimen. Kumpulan kawalan diajar kosakata baru menggunakan kaedah pengajaran konvensional manakala kumpulan eksperimen diajar menggunakan PBL. Untuk mengukur keberkesanan PBL berbanding kaedah konvensional pembelajaran kosakata, ujian-pasca (*posttest*) dan ujian-pasca yang dilewatkan (*delayed posttest*) telah diberikan kepada kedua-dua kumpulan.

Analisis statistik markah siri ujian menunjukkan bahawa kumpulan eksperimen memperolehi markah yang lebih baik dalam pengingatan semula dan pengekalan kosakata. Kajiselidik tentang persepsi terhadap PBL menyokong dapatan berkenaan tahap signifikans PBL. Kajiselidik tersebut menunjukkan bahawa pelajar berpuas hati dengan kaedah pengajaran yang baru tersebut dan juga kerjakumpulan bersama rakan sekelas. Dapatan kajian ini menyokong dakwaan bahawa pengingatan semula dan pengekalan pengetahuan kosakata perlu dilakukan dalam konteks, melalui kolaborasi, dan kerja projek dikalangan pelajar.

THE EFFECT OF PROJECT-BASED LEARNING (PBL) ON IRANIAN EFL LEARNERS' VOCABULARY RECALL AND RETENTION

ABSTRACT

This study explored the effectiveness of the Project-based Learning (PBL) method on vocabulary learning and acquisition of Iranian elementary EFL learners. PBL is an instructional method which involves students learning and facilitating their own projects. Working in collaboration with others, engaging in self-directed learning, applying new knowledge to solve problems, and reflecting on what has been learned are the main features of this method. PBL also incorporates real-life challenges where the focus is on authentic problems or questions and where solutions have the potential to be implemented. The study measured the effectiveness of PBL on EFL learners' vocabulary recall and retention based on an experimental methodology. For this purpose, a pretest-treatment-posttest approach was employed on two groups of subjects, control and experimental. The former was taught new vocabulary items using the conventional teaching method while the experimental group was taught using PBL. To measure the effectiveness of PBL against the conventional method of learning vocabulary, post-tests and delayed post-tests were administered to both groups.

The statistical analysis of the test scores shows that the experimental group scored better for recall and retention of new vocabulary. A survey on the students' perceptions of PBL supports the findings on the significance of PBL. The survey reveals that students were satisfied with the new method of teaching and enjoyed the teamwork and their engagement with their classmates. The current research findings support the claim that learning and acquiring vocabulary knowledge should be done in context, through collaboration with other learners, and project work.

Chapter 1

Introduction

1.1. Introduction

This chapter provides an overview of the research. It briefly discusses the background of the study in the context of vocabulary teaching and states the research problem. The remainder of this chapter is organized as follows. First, a background to the problem is provided followed by the problem statement. Then, the objectives of the study are listed, leading to the research questions. Next, the significance of the study is elaborated followed by the theoretical conceptualization. Lastly, the scope and limitations are discussed followed by definition of the key terms and summary of the chapter.

1.2. Background to the Study

Laufer (1997) states that learning vocabulary is at the heart of language learning and use. Vocabulary knowledge makes up the basic building blocks of language learning and usage. Without the vocabulary, speakers of a language cannot convey meaning and communicate effectively. Throughout the 1940s-1970s, vocabulary was neglected in teacher preparation programmes and teachers did not pay any attention to, nor consider the importance of vocabulary in their lesson plans. Allen (1983) believes this was mainly due to three crucial reasons. First, many believed that one must know how the words work together in English sentences; therefore, grammar should be emphasized more than vocabulary. Second, some

methodologists believed that meanings of words could not be adequately taught. So, it was better to avoid teaching them. Third, some specialists were afraid that exposure to too many words might cause students to make mistakes in sentence construction. However, any experienced teacher knows that even when students have more or less mastered the English grammar, they still face masses of unknown words as they continue studying (Allen, 1983).

A number of research studies conducted by some scholars, have dealt with lexical problems of language learners. Scholars such as Allen (1983) and Bowen et al. (1985) have shown that lexical problems frequently interfere with communication, that is, communication breaks down when people do not use the right words. Therefore, there is an increased interest in vocabulary as a component of every language. Vocabulary is viewed as a significant component of standardized language tests and attention is given by methodologists and programme planners for the most effective ways to promote the command of vocabulary among learners.

There are various techniques and devices for teaching vocabulary in the classrooms. Weatherford (1990) states that there is a variety of classroom techniques for second and foreign language vocabulary learning. The techniques include rote rehearsal, the use of visual aids, rote-playing, vocabulary learning in a specific cultural context, vocabulary learning through art activities, the root-word approach, mnemonic techniques, such as the key word approach, use of the notion of semantic fields to illustrate conceptual relationships between words, two types of vocabulary learning through music (simple song, and the desuggestopedia method), physical activities, as in Total Physical Response (TPR) instruction, study of cognates and

direct borrowing, study of loan translations, use of soap-opera style drama tapes in the language laboratory, analogies, computer-assisted instruction through drills and games, and synonyms.

Since vocabulary knowledge is an integral part of any language learning process, it would be impossible to learn a language without vocabulary. According to Rivers (1981, p. 110), "vocabulary cannot be taught. It can be presented, explained, included in all kinds of activities, but it must be learned by the individual". In this regard she suggests that language teachers must arouse interest in words and a certain excitement in personal development in this area". And more importantly, they can help their students by giving them ideas on how to learn vocabulary and some guidance on what to learn.

1.3. Problem Statement

According to Kamyab (2007), the Iranian educational system is content centred, rote memorization is emphasized and students are required to acquire a great deal of factual knowledge. Texts are published by the Ministry of Education. The language of instruction is Farsi, while English and Arabic are taught as foreign languages in schools. English is formally taught as a foreign language to Iranian students from the second year in junior high school. The students have about three hours of formal instruction in English every week. Teachers use a combination of grammar-translation method and audio-lingual method in both private and public schools. At the university level, students mostly study English for academic purposes (EAP) and therefore, reading is the most emphasized skill. The first university course

that students have to take is "General English" and then they take more specialized English courses in which they use field-related English texts and learn related terminology.

In Iran, educational policies concerning the school system, the curriculum standards, compilation of textbooks and examinations are monitored and authorized by the Ministry of Education for both public and private schools. Teaching methods are not given much attention and are therefore quite conventional and very much teacher-centred. This is the same for the teaching of English (Talebinezhad and Aliakbari, 2002). English is taught as a foreign language (FL) and practiced within a context-restricted environment where language learning is shaped largely through particular textbooks and teacher-centred classroom. In addition to being teacher-centred, the Iranian educational system advocates that language is taught in a deductive way. The English textbooks used in private and public schools focus on vocabulary and reading skills, with almost no attention to other skills such as speaking, writing, pronunciation and listening. The task of an English teacher at school is to teach a lesson, translate the lesson in the students' native language, and then give the meaning of the new vocabulary to students. At the end of the session, students are supposed to take turns to read aloud the taught lesson in English and also the translation of the same content in their native language (Shafaei, 2008). This essentially means that, in private and public schools, the grammar translation method (GTM) is the main approach used to teach English. This method focuses on textbook without any attention to listening, speaking and does not place much emphasis on context in language learning.

The FL nature of English in Iran means that there is little support from social context outside the classroom in both private and public schools. In other words, Iranian EFL students do not have much exposure to English outside the classroom, as very few English programmes are broadcasted on TV and radio. Nonetheless, through advancements in technology, access to the Internet, and the rapid growth of private language institutes, the opportunities for English language learning have been greatly enhanced. These private language institutes are popular among Iranian students, so they help students focus on more advanced English language and skills. However, the method used to teach in these institutes is still very conventional and mostly teacher-centred and the emphasis is on memorization of vocabulary (Talebinezhad and Sadeghi, 2005).

The traditional approach of lectures and laboratory exercises provide the necessary foundation of knowledge, but they often limit students' participation in the learning process, whereas vocabulary acquisition is a very learner-centred activity with the effectiveness of the learner's strategies depending on his or her attitude and motivation towards new vocabulary acquisition (Gu, 2003). This suggests that the main motivational learning factor must come from the student. Whilst this may be true, learning vocabulary in a cooperative learning environment can be effective because it allows students to learn from peers closest to them. Murphey and Arao (2001) point out that students feel more relaxed and learn more from peers since they see that making mistakes is acceptable, having goals is good, and learning English can be fun. Since vocabulary acquisition is an extremely important part of second and foreign language acquisition, finding authentic ways to engage students actively in the learning process is one of the greatest challenges in the teaching process.

It is important for students to become aware of their potentials and capabilities in completing tasks. According to Vygotsky (1978), language and consciousness are within the same matrix of social activity, so language is not something isolated. If the students are conscious about their abilities, they can perform well in learning and also can actively participate in social activities of language which causes language learning. Project-based Learning (PBL) is one of the modern teaching methods based on constructivist pedagogy that intends to engage learners in deep learning process with issues and questions that are rich and relevant to the topic of lesson. It is designed to be used for complex issues that require learners to investigate in order to understand (Barron et al., 1998). PBL framework emphasizes more on cooperation and collaboration between team members. PBL also relies on learning groups in which learners take full responsibility for their learning.

Given the importance of vocabulary in language learning, the recommended method for effective vocabulary learning, the cultural background of the learners and the drawback in the Iranian educational system, PBL is chosen in the present study as a teaching method in the Iranian EFL vocabulary classroom. PBL involves language learning in context and creates collaboration among students. It is hoped that the study on the use of PBL in vocabulary learning will fill the existing gap in the research on effective vocabulary learning in the Iranian EFL context.

1.4. Trends in Language Teaching Methods

A brief history of teaching methods is presented to clarify why PBL is chosen as the teaching method to teach vocabulary in the current study. Throughout history, language has been studied from different aspects. Vocabulary has been studied in the texts and grouped into different categories. The traditionalists believed that an underlying similarity existed among all languages so they tried to apply the rules of Latin Grammar to modern language like English. It was then that a different view of language was put forward by a new school of linguistics called Structuralism. Their description of language was very different from that of the Traditionalists (Richards and Rogers, 2002). They believed in the domination of speech over written language and that each language had its own system and to them language was what the native speakers said, not what someone thought they ought to say. Thus, they argued that languages had different systems and had to be studied separately.

In the 1950's another view of language emerged. The advocates of this school of linguistics called themselves Transformationalists. They argued that language was a rule-governed mental phenomenon that described the performance of the speakers. They stated that the first goal of linguistics was to establish what an individual human mind knew, i.e., competence. Moreover, they believed that there were many aspects of grammar common to all languages (Saetti, 2005). In the 1970's another group of linguists who called themselves Functionalists criticized the Transformationalists' view of language as being too abstract and formal. They argued that none of the previous theories of language had taken into account the social and situational context in which language was being used. Constructivism is

hardly a new school of thought. Jean Piaget and Lev Vygotsky, names often associated with constructivism, are not by any means new to the scene of language studies. Yet constructivism emerged as a prevailing paradigm only in the last part of the twentieth century. This perspective might be described as an emphasis on active processes of construction of meaning, attention to texts as a means of gaining insights into those processes and an interest in the nature of knowledge and its variations, including the nature of knowledge associated with membership in a particular group (Spivery, 1997, pp. 23-24). Moreover, constructivist scholarship can focus on "individuals engaged in social practices on a collaborative group or on a global community."

Along with the different approaches of language learning, different methods of teaching language were formed by concentrating on specific aspects of language. The Grammar-Translation Method (GTM) derived from traditional approaches to the teaching of Latin and Greek in the nineteenth century. It was a way of studying a language through detailed analysis of its grammar rules followed by translating sentences and text into and out of the target language (Richards and Rogers, 2002). Students in this method develop the ability to read prestigious literary texts. They also learn to read and write in the target language accurately, which is a necessity. In addition, the mother tongue is used as the medium of instruction, without any attention to listening and speaking. The Direct Method, Reading Method, the Oral Approach or Situational Language Teaching, and the Audio-Lingual Method came after traditional method, i.e., GTM. Each of them focused on specific skills of language based on the approaches they were formed. For instance, Direct Method trains language learners to communicate in target language while Reading Method

focuses on reading as the most important part of language learning. Situational Language Teaching believed that language form is determined by its context and situation. Audio-Lingual Method was introduced to help learners practice and gain a high degree of oral skills for specific purposes. All of these mentioned teaching methods were formed based on Structuralism and some of the principles of Behaviourism regardless of their differences all of them provide teacher-centred environment (Saetti, 2005). According to Kamyab (2007), teachers in Iran still use a combination of grammar-translation method and audio-lingual method in most schools which are the traditional methods of teaching a language.

The search for better methods continued in the 1970's and 1980's. Teachers and researchers sought new ways of facilitating and accelerating language learning. New assumptions were made about language and language learning. New syllabus design, teaching objectives and techniques were proposed. Learners' needs, experiences and feelings were placed at the centre of the learning process. Total Physical Response (learning through physical activities), the Silent Way (learning the target language through its sounds), Community Language Learning (group and social learning), Suggestopedia (concerning with powers of human brain and the importance of psychological and cultural variables in learning), and Competency-Based Language (learning through communicative competence) were introduced as the innovative methods in language teaching and then were followed by the current communicative methods that include Communicative Language Teaching, the Natural Approach, Cooperative Language Learning, Content-Based Instruction, and Task-Based Language Teaching. All these new and modern methods after GTM tried to focus on some skills or all the skills of language (Saetti, 2005). The search for

alternative methods continued almost to the end of the twentieth century. Towards the end of century the notion of method was re-examined and re-evaluated. It was argued that, the context of teaching and learning situations, which plays an important role in determining the learning outcomes, was ignored. Therefore, a more complex view of language teaching and learning was developed and the focus on teaching methods shifted towards pedagogy. Principles and general guidelines were proposed to replace the notion of method and this new era came to be known as the post-method era (Saetti, 2005). Table 1.1 illustrates the trend of schools of thought in second and foreign language teaching and their typical themes.

Table 1.1: Schools of Thought in Second and Foreign Language Teaching (Source: Brown, 2000, P. 12)

Time Frame	Schools of Thought	Typical Themes
Early 1900s & 1940s & 1950s	Structuralism & Behaviourism	• Description • Observable method • Scientific method • Empiricism • Surface structure • Conditioning, reinforcement
1960s & 1970s	Rationalism & Cognitive Psychology	• Generative linguistics • Acquisition • Interlanguage • Universal grammar • Competence • Deep structure
1980s, 1990s & early 2000	Constructivism	• Interactive discourse • Sociocultural variables • Cooperative group learning • Interlanguage variability • Interactionist hypotheses

The constructivist pedagogy as a theory originated many years ago. However, the empirical research on constructivist pedagogy started only in the early 1990s

(Richardson, 2003). One of the recent constructivist pedagogy practices is Project-based Learning (PBL). As argued by Abdulwahab et al. (2008), PBL is an educational methodology which draws on the constructivist pedagogy philosophy. It transforms education from a teacher-centred to a student-centred approach by designing curriculum emphasizing more on projects rather than classroom lectures. Hence, the students have principal roles in constructing the knowledge. PBL does not only allow students to independently set and accomplish goals, but also provides them with an avenue in which to explore their choices when completing both personal and academic goals. Moreover, PBL is a model that organizes learning around projects. Students' projects shift the emphasis away from teacher-centred instruction to student-centred learning. Definitions of "project-based instruction" include features relating to the use of an authentic "driving" question, a community of inquiry, and the use of cognitive (technology-based) tools (Krajcik et al., 1994; Marx et al., 1994) and "Expeditionary Learning" features of comprehensive school improvement, community service, and multidisciplinary themes (Expeditionary Learning Outward Bound, 1999). Depending on the scope of the course, project duration can range from a few days to a semester or more. With project-based learning, students may conduct background research, collect data, compare observations with theory, and draw conclusions based on their research. Students often learn from their mistakes and must modify their approaches to obtain better results. They may collaborate with peers and build on strengths provided by group members.

Krashen (1989) believes that presentation and practice of vocabulary should be carried out in context rather than in isolation. In his well-known Input Hypothesis

he points out, there is an internal language acquisition device, which must be accompanied by an essential external ingredient, comprehensible input, for language acquisition. As for vocabulary learning, context is one of the most important sources which can provide the so-called comprehensible input for learning vocabulary. As a result, vocabulary presentation and practice should be carried out in context rather than in isolation. Learning vocabulary is an ongoing process which students can recall and retain the vocabulary they find useful and relevant to their subject matter by learning vocabulary through context, cooperative learning, using technology and defining projects. As Krashen (1982) claims, there are two ways to internalize second or foreign language. One is subconscious named as "acquisition" while the other is conscious referred as "learning". As argued by Krashen, the first one is like to what a child picks up as a language, while in the latter the main focus is on figuring out the rules and being aware of one's learning process. According to him, fluency in language is based on acquisition not learning. Conscious learning process and subconscious acquisition process are mutually exclusive. Brown (2000) recommends large doses of acquisition activity in the classroom. Oxford (1990) accepts Krashen's distinction between learning and acquisition, however not as two separated parts of a process, but rather as a continuous experience. All through the process, learning strategies can help to reach proficiency in a foreign language which is the final goal. Language learning strategies contribute to all parts of the learning-acquisition continuum. For instance, analytic strategies are directly related to the learning end of the continuum, while strategies involving naturalistic practise facilitate the acquisition of language skills. Guessing and memory strategies are equally useful to both learning and acquisition (Oxford, 1990).

Ooi and Kim-Seoh (1996) claim that, context provides the necessary input as much information about the lexical item as possible, which eases the way to vocabulary learning. Besides, according to De Groot and Keijer (2000), cognate status, concreteness, frequency, and type of the vocabulary item affect word retention. In other words, the environment in which the learners find the opportunities to explore the mentioned aspects of words can be a great help to them to overcome many of the difficulties of vocabulary retention. Therefore, a method which focuses more on context learning is helpful. Since PBL is a method which engages students in the learning process, provides a learning environment for learners, and emphasizes more on context, it is more likely to help learners learn and acquire new vocabulary. Therefore, this study seeks to find out the effectiveness of the project-based teaching method on the vocabulary learning and acquisition of Iranian elementary EFL learners. It sets out to do this by measuring students' recall and retention of vocabulary and perceptions on PBL.

1.5. Objectives of the Study

Since PBL is a method which organizes learning around projects and facilitates learning in context, in collaboration with peers, it is conjectured that it will improve EFL learners' vocabulary learning and acquisition. There is a lack of significant research and publication regarding PBL in vocabulary-related studies in the Iranian context. This is the motivation the current research is carried to fill this gap by implementing PBL and investigating its effect on Iranian learners' vocabulary knowledge. The main objectives of the current study are as follows:

1. To investigate the effect of PBL on Iranian EFL learners' vocabulary recall rate.

2. To investigate the effect of PBL on Iranian EFL learners' vocabulary retention rate.

3. To find out the perceptions of Iranian EFL learners on the application of PBL in their vocabulary leaning and acquisition.

PBL as a method consists of approach, design and procedure which include learning strategies that can enhance learners' vocabulary knowledge (Richards and Rodgers, 1986). As pointed out by Lawson and Hogben (1996) there is a correlation between the overall frequencies of the use of learning strategies and overall number of words which individual learners recall in a real learning task. Thus, the effect of PBL on Iranian EFL learners' vocabulary learning is possible by investigating their recall and retention of word meaning. "The more processes that are involved in the learning of a word, the superior the retention and recall" (Carter, 1998, p. 203; Ramachandran and Rahim, 2004, p. 162). With regard to this and the discussions in the preceding section, it is therefore expected that PBL will have a positive effect on Iranian EFL learners' recall and retention of vocabulary. Kvam (1999) investigated the effect of a learning method on learners' long-term ability to retain the material learned in class by testing students immediately after the course, and by testing them again several months later to see their retention. Since acquisition of vocabulary deals with long-term memory to measure the effect of PBL on vocabulary acquisition, retention rate is of great importance. With regard to the last objective, to explore learners' perceptions about PBL in learning and vocabulary acquisition and its advantages over the existing method, a Likert-type questionnaire will be used.

This helps to reflect learners' experience after PBL treatment. Given the objectives, the research questions are presented in the post section.

1.6. Research Questions

In line with the objectives, the current study sets out to address the following research questions:

1. To what extent does PBL affect Iranian EFL learners' vocabulary recall rate?

2. To what extent does PBL affect Iranian EFL learners' vocabulary retention rate?

3. Do Iranian EFL learners find PBL effective in their vocabulary learning and acquisition?

The first research question measures the effect of PBL on recall rate of vocabulary knowledge, while the second question seeks to measure this effect on retention rate of students' knowledge during implementation of PBL. The last question, seeks to investigate how useful the learners find PBL method. All the research questions of this study are quantitative in nature; the first two research questions measure the effectiveness of PBL by comparing the scores and the third research question applies Likert-type questionnaire to investigate students' perceptions on PBL.

1.7. Significance of the Study

This study is significant for several reasons. First, it contributes to the Iranian educational system which means if this study shows that PBL is an effective technique in vocabulary learning, teachers can find a remedy for poor vocabulary knowledge of their elementary EFL learners. According to Brown et al. (1989), constructivist pedagogy is a paradigm that perceives learning as a process of constructing knowledge by learners themselves, instead of the teacher taking the role of passively pouring information in their minds. Therefore, learning is a continuous journey of searching for meanings in constructivism. That is, learning should focus on concepts and contextualization instead of instructing isolated facts (Brooks and Brooks, 1993). Students link new knowledge with their previous knowledge in the process of knowledge creation. Furthermore, in constructivism, student's social interaction with peers and the teacher, the student's individual learning style and learning capabilities are all important factors. Since constructivism emphasizes on the learner's important role in knowledge construction, constructivism strategies in teaching provides a learner-centred environment for the learners to learn and link new knowledge to the previous knowledge to improve their learning abilities. With regard to the mentioned theories, if learner-centred context is provided for the Iranian elementary EFL students, it will help them to overcome their poor vocabulary knowledge. This is indeed a matter of serious concern among those involved in the Iranian educational system.

Second, PBL is beneficial for the English curriculum in Iran because in this method, new words are taught by conducting projects and the task of the students is

to fulfil the projects by using different kinds of tools. It should be noted that the traditional way of teaching vocabulary through definitions, synonyms, and translations are mostly used by Iranian teachers to teach vocabulary items to the elementary EFL students. Thus, it is of prime importance to find the most effective technique of vocabulary teaching. According to Vygotsky (1986), learning is a socio-cultural practice and emphasizes on the contextual nature of learning. In line with this, Krashen (1989) also believes that presentation and practice of vocabulary should be carried out in context rather than isolation. Furthermore, PBL is based on constructivist pedagogy which emphasizes more on contextualization instead of instructing isolated facts. Therefore, if new knowledge is presented in context and in a learner-centred environment, it is conjectured that it will help learners increase their knowledge and improve their learning skills.

Third, it can help the policy makers in defining policies and rules for language centres. The findings of this research can lead to revising the educational policies in teaching language by Iranian institutes; therefore, resulting in practical contributions. According to Talebinezhad and Sadeghi (2005), most of Iranian students enrol in private language institutes because they feel they cannot get satisfactory results from their English courses at school. They think they can only learn the very basic skills of English language over there. Thus, the findings can help the private centres to modify their teaching methods and satisfy more students.

Last, this research explores the students' perception about PBL because as mentioned earlier, PBL provides a learner-centred environment which considers

learners' need and their cooperation in learning vocabulary. Therefore, it can increase Iranian EFL learners' group work and generally their perception about PBL.

1.8. Scope and Limitations

Vocabulary acquisition has become an extremely important part of second and foreign language acquisition. Teachers cannot rely on students acquiring the needed vocabulary just through interaction with the language, and finding authentic ways to engage students actively in the learning process poses one of the greatest challenges in the teaching process. Besides, vocabulary acquisition is a learner-centred activity concerning studying and being disciplined to set goals; students enjoy activities and learn vocabulary in collaboration with peers (Murphey and Arao, 2001).

The central issue of the current study deals with the implementation of PBL for English language learning classes and investigating its effect on learners' vocabulary knowledge. Although this study considered some randomly selected Iranian elementary EFL students for its objectives, the findings of this study may not be generalized to the whole Iranian EFL learners because the subjects were from one area of the country.

1.9. Definition of Key Terms

Project-Based Learning: A variety of definitions have been provided for project-based learning; however, this research considers project-based learning as an educational approach which is based on authentic learning activities that engage students' interest and motivation and are generally based on the real life projects which engage learners in the learning process. The aim of these projects is fostering collaborative learning, creativity, responsibility (Hedge, 2000), and developing critical thinking skills (Beckett, 2005; Kobayashi, 2004).

PBL: In academic literature, the abbreviation form "PBL" has been used interchangeably for both project-based learning and problem-based learning. However, in this study wherever PBL is used, it stands for project-based learning.

Vocabulary Recall: According to Nation (1990) knowing a word receptively involves being able to recognize it, being able to distinguish it from words with a similar form, being able to judge if the word form sounds right or looks right, having an expectation of what grammatical pattern the word will occur in, having some expectation of the words it collocates with, and being able to recall its meaning when it is met. Therefore, in recall tests learners' production of a word in the target language is tested while in recognition tests the focus is on if the learners know the meaning of the word they see or hear it. Accordingly, in the current study the term vocabulary recall is referred to the measurement of learners' ability to learn and produce words in English language which is considered as the target language.

Vocabulary Retention: According to Lin and Huang (2008), the difference between the scores of the pre-test and that of the delayed post-test defines vocabulary retention. Vocabulary retention is measured by a comparison made between the scores of the pre-test and those of the delayed post-test. In addition Hulstijn and Laufer (2001) believe that in-depth processing and more mental efforts, the hypothesis, the cognitive search and evaluation activities are essential components in lexical acquisition and retention. With regard to the definition mentioned, the term vocabulary retention in this study is referred to the measurement of vocabulary acquisition.

Vocabulary Acquisition: According to Krashen (1989), with regard to the role of consciousness, however, two complementary viewpoints can be distinguished. An implicit viewpoint would hold that incidental vocabulary acquisition takes place without awareness, involving implicit learning processes only. In other words, vocabulary acquisition is a process which happens without the learner's awareness.

Vocabulary Learning: According to Rubin (1987) learning is the process by which information is obtained, stored, retrieved, and used. Therefore, in this study vocabulary learning is referred to obtaining, storage, retrieving and usage of vocabulary.

Vocabulary Depth and Breadth: In view of the importance of vocabulary, Hunt and Beglar (2005) present a framework for developing vocabulary in EFL settings which included tasks that developed both vocabulary breadth and depth. Vocabulary breadth refers to the quantity of vocabulary items known by an

individual. Knowing an item means more than its knowing its meaning (concepts, referents, associations), but also its form (spelling, pronunciation, word parts) and use (functions, collocations, constraints) (Nation, 2001). Thus, depth refers to the quality of that vocabulary knowledge.

Implicit Vs. Explicit Learning: As mentioned by Ellis (1994, p. 1), implicit learning is typically defined as "acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operation", while explicit learning is said to be characterized by "more conscious operation where the individual makes and tests hypotheses in a search for structure".

1.10. Summary

This chapter presented the purpose of the study, revealed the significance of the study and identified the problem of Iranian elementary EFL learners in vocabulary learning and acquisition to propose a teaching method which can improve learners' vocabulary recall and retention rates. This was followed by research questions that the study had set out to answer. Lastly, the key terms were defined. The related literature on vocabulary learning and acquisition and also PBL is elaborated in the following chapter.

Chapter 2

Review of Related Literature

2.1. Introduction

The purpose of this chapter is to review related literature on vocabulary teaching and the PBL method. The chapter is divided into several sections. It begins with a discussion on vocabulary acquisition and learning research followed by further explications of the related issues including discussions on vocabulary knowledge depth and breadth, vocabulary ability, lexical competence and processes of vocabulary acquisition. The theoretical background of the study is then discussed followed by theories of second and foreign language acquisition. Then, perspectives of PBL, previous related studies and PBL implementation shortcomings are explained. The chapter concludes with a presentation of the theoretical conceptualization of the study.

2.2. Definition of Vocabulary Knowledge

In recent decades, foreign and second language vocabulary researchers have proposed various but complementary frameworks to define what it means to know a word. Most researchers agree that lexical knowledge is not an all-or-nothing phenomenon, but involves degrees of knowledge. They suggest it should be constructed as a continuum, or continua, consisting of several levels and dimensions of knowledge. Much of what is written on word knowledge goes back to the well-known vocabulary knowledge framework of Richards (1976). He identifies seven

aspects of word knowledge (e.g., syntactic behaviour, associations, semantic value, different meanings, underlying form and derivations). Nation (1990) distinguishes eight types of word knowledge (e.g., word's spoken form, word's written form, part of speech, word's collocation, frequency, stylistic, constraints, word's conceptual meaning and word's semantic network), which were specified both for receptive and productive knowledge. Chapelle (1998) argues that a trait definition of vocabulary should contain four dimensions: (a) vocabulary size, (b) knowledge of word characteristics, (c) lexicon organization, and (d) processes of lexical access.

Henriksen (1999) proposes three separate but related vocabulary dimensions: (a) a "partial-precise knowledge" dimension, (b) a "depth of knowledge" dimension, and (c) a "receptive-productive" dimension. Qian's (2002) recent framework, developed based on the collective strength of earlier models of vocabulary knowledge proposes that vocabulary knowledge comprises four intrinsically connected dimensions: a) vocabulary size, (b) depth of vocabulary knowledge, (c) lexical organization, and (d) automaticity of receptive–productive knowledge. According to the specific purpose of language use, the importance of various factors in these dimensions will vary. In all the frameworks reviewed, there is a clear consensus that vocabulary knowledge should at least comprise two dimensions, which are vocabulary breadth, or size, and depth, or quality, of vocabulary knowledge. Vocabulary breadth refers to the number of words the meaning of which a learner has at least some superficial knowledge. Depth of vocabulary knowledge is defined as a learner's level knowledge of various aspects of a given word, or how well the learner knows this word (Shen, 2008)

2.3. Breadth and Depth of Vocabulary Knowledge

Lexical knowledge can be looked at from various dimensions, notably the quantitative and qualitative. Hunt and Beglar (2005) in view of the importance of vocabulary present a framework for developing vocabulary in EFL settings which include tasks that developed both vocabulary breadth and depth. Vocabulary breadth deals with the quantity of vocabulary items known by an individual. Knowing an item means more than knowing its meaning (concepts, referents, associations), but also its form (spelling, pronunciation, word parts) and use (functions, collocations, constraints) while depth refers to the quality of that vocabulary knowledge (Nation, 2001).

Nation and Waring (1997) believe that the breadth of knowledge is concerned with the question: How much vocabulary does a second language learner need? One needs to connect the two statements properly to know a word, which means more than just familiarity with its meaning and form (Schmitt and McCarthy, 1997). Therefore, Vermeer (2001) suggests that breadth is a reflection of input. More input leads to greater depth which means without a sizable quantity of known vocabulary items, learners are likely to have little depth of vocabulary.

More interesting from a L2 vocabulary acquisition research point of view than mere quantitative aspects of lexical knowledge is the concept of depth of word knowledge, which is described by Read (1993) as the quality of the learner's vocabulary knowledge. Many researchers have stressed the complex and dynamic

nature of this knowledge. Gass (1988) describes various distinctions to be taken into account, e.g. reception versus production and knowledge versus control.

2.4. Processes of Vocabulary Acquisition: Implicit vs. Explicit Learning

L2 vocabulary acquisition is a very complex phenomenon which involves several different learning processes (Ellis, 1995). The most commonly drawn distinction is between implicit and explicit learning. Implicit (or incidental) learning is often defined in negative terms, e.g. as accidental learning of information without the intention of remembering that information (Hulstijn et al., 1996). Explicit learning, on the other hand, refers to the application of vocabulary learning strategies on the part of the learner. Incidental learning is a completely "subconscious" process. Huckin and Coady (1999), for example, point out that implicit learning cannot be totally incidental as at least some attention must be paid to the input by the learner. Current definitions of implicit and explicit learning which generally focus on the absence or presence of conscious operations as a crucial distinguishing factor, is in line with Ellis's (1994) terminology which defines implicit learning as the acquisition of knowledge that takes place naturally, simply and without conscious operation, while explicit learning is defined as more conscious operation which the individual makes and tests hypotheses in a search for structure.

The extreme positions regarding vocabulary acquisition processes are evident in the Implicit Vocabulary Learning Hypothesis and Explicit Vocabulary Learning Hypothesis. The former is based on Krashen's seminal Input Hypothesis (Krashen, 1989) and states that meanings of new words are acquired subconsciously as a result